

CLAIMS

1. A diffuser for a motor-fan assembly, comprising:

a disc-shaped plate having a lower surface;

a first plurality of vanes located on the outer periphery for directing airflow
5 towards the lower surface of the plate; and

a second plurality of vanes on the lower surface arranged circumferentially for
slowing and directing the airflow to the interior of the motor-fan assembly.

2. The diffuser of claim 1, wherein said first plurality of vanes are comprised of an
10 aperture on the periphery of the plate and a channel for directing the airflow towards
the lower surface of the plate.

3. The diffuser of claim 1, wherein said first plurality of vanes are airfoil shaped and
angled downward for directing the airflow towards the lower surface of the plate.

4. The diffuser of claim 1, wherein said second plurality of vanes are spiral shaped.

5. A motor-fan assembly having a diffuser of the type for slowing the airflow and
reducing airflow noise, comprising:

a housing, armature, and related components;

a disc-shaped plate having a lower surface;

a first plurality of vanes located on the outer periphery for directing airflow
towards the lower surface of the plate; and

a second plurality of vanes on the lower surface arranged circumferentially for

slowing and directing the airflow to the interior of the motor-fan assembly.

5 6. The motor-fan assembly of claim 5, wherein said first plurality of vanes are airfoil shaped and angled downward for directing the airflow towards the lower surface of the plate.

7. The motor-fan assembly of claim 5, wherein said second plurality of vanes are spiral shaped.

10 8. A floor care appliance, comprising:
a motor-fan assembly for creating an airflow;
a diffuser for slowing the airflow and reducing airflow noise, comprising:
a disc-shaped plate having a lower surface;
a first plurality of vanes located on the outer periphery for directing airflow
15 towards the lower surface of the plate; and
a second plurality of vanes on the lower surface arranged circumferentially
for slowing and directing the airflow to the interior of the motor-fan assembly.

20 9. The floor care appliance of claim 8, wherein said first plurality of vanes are airfoil shaped and angled downward for directing the airflow towards the lower surface of the plate.

10. The floor care appliance of claim 5, wherein said second plurality of vanes are spiral shaped.